

ABSTRACT OF THE DISCLOSURE

A data switch for network communications includes a first data port interface which supports at least one data port which transmits and receives data. A second data port interface is also provided supporting at least one data port transmitting and receiving data. A CPU interface is provided, with the CPU interface configured to communicate with a CPU. A common memory is provided, and communicates with the first data port interface and the second data port interface. A memory management unit is provided, and communicates data from the first data port interface and the second data port interface and an common memory. A communication channel is provided, with the communication channel communicating data and messaging information between the first data port interface, the second data port interface, and the memory management unit. One data port interface of the first and second data port interfaces has a fast filtering processor for filtering the data coming into the one data port interface, and taking selective filter action based upon a filtering result. Also the one data port interface includes a flow monitor for monitoring flows of data through the network switch, where a flow of data is defined by a combination of a source address and a destination address for a portion of the data passing through the network switch.